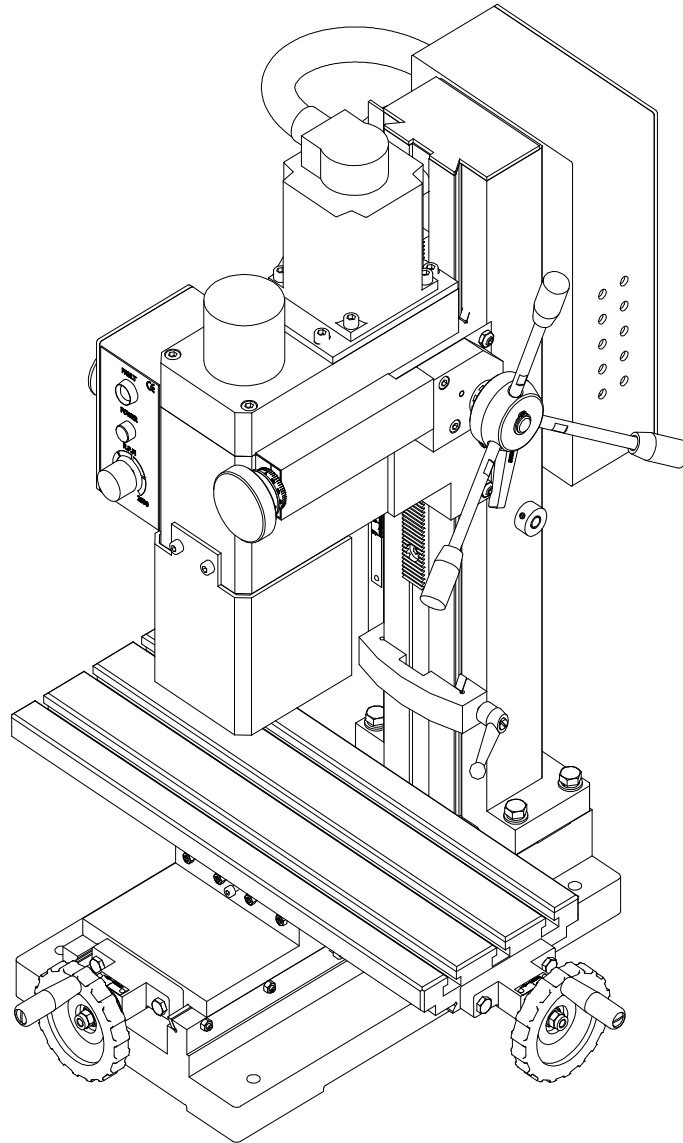


Mini Milling/Drilling Machine

Item: SX2P

Instruction Manual



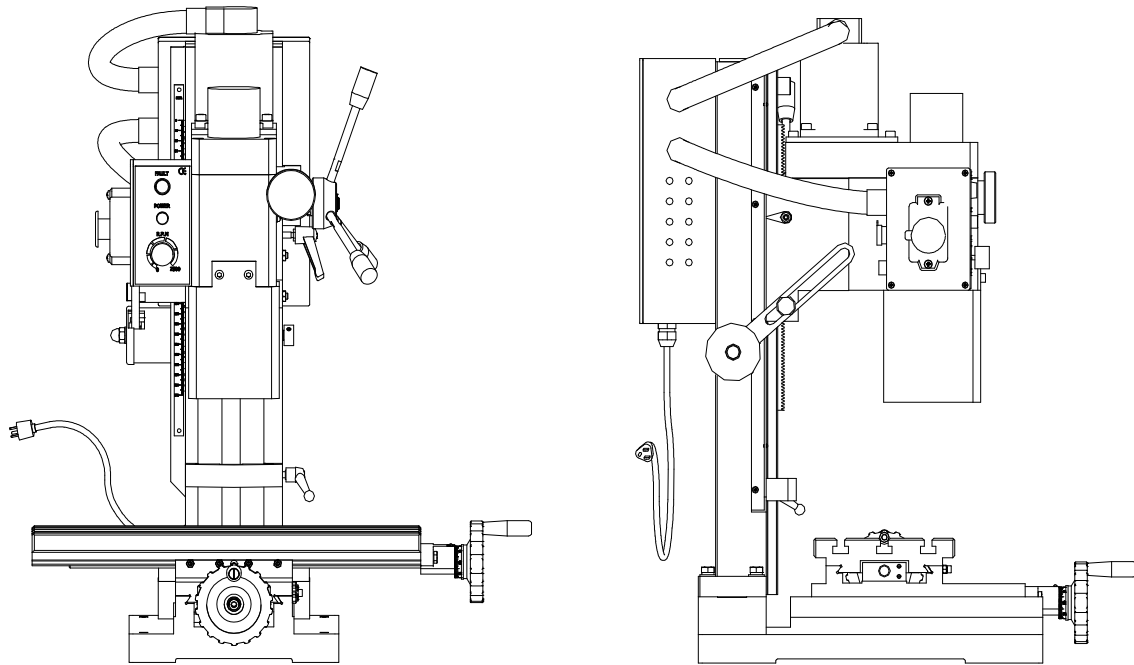
Pleas read all instructions and warning before using this tool

Some Safety Features of this Machine

This machine is designed for multi-purpose machine, high efficiency and oprrecision. To make sure the body safety, please read the manual before use it.

If the operator intend to use this machine beyond our design purpose, please ontract the manufacturer or your dealer before operation.

Picture 1



- 1, Purpose of this machine: This machine is designed for drilling, deep milling and face milling of small work piece with limit of size“300mm * 200mm* 200mm”.
If the operator intend to use this machine beyond our design purpose,please contract the manufacturer or your dealer before operation.
- 2, The following items is prohibited for this machine
 - Operating machine without going through of manual.
 - Operating machine without professional training of drilling & milling work.
 - Operation machine beyond the design purpose and limit of this machine without getting sufficient consultant about safety from manufacturer or our agent.
 - Operating machine without making sure that every safety precaution is well according to this instruction.
- 3, Some important safety information.
 - The noise level during operation is 50dB(A).
 - The temperature rang suitable for the operation & storage of this machine is -20~+40 degree C.
- 4, Special Warning for this machine
 - Warning!After interruption due to power failure,There exist the risk of accidentally running up.Be sure to pay attention to this risk and turn off machine as soon as machine interrupt.
 - Warning!Always wear approved eye protection during operation.
- 5, Correct handling of this machine.
 - The net weight of this machine is 50Kg. It would be better to handle this machine with the help of appropriate lifting tool.
 - If the operator has to handle this machine without lifting tool, be sure to make sure you can afford this weight,and handle it with care and with common sense of self-protection.

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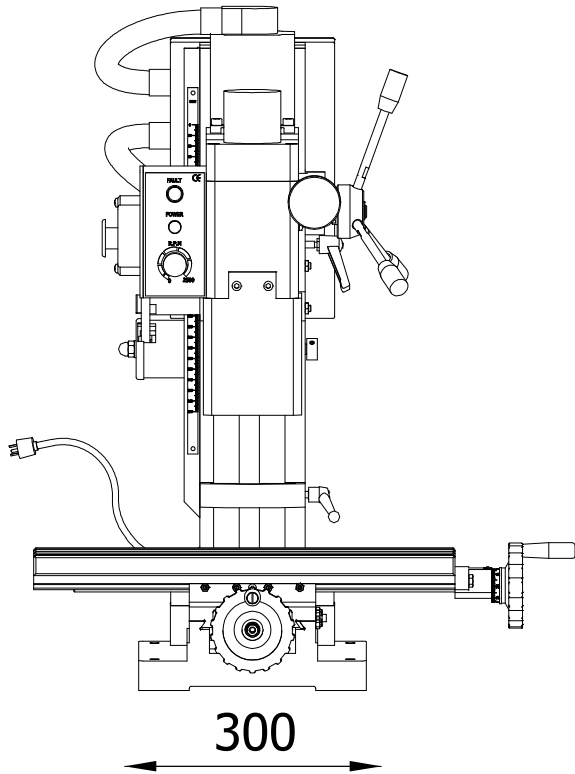
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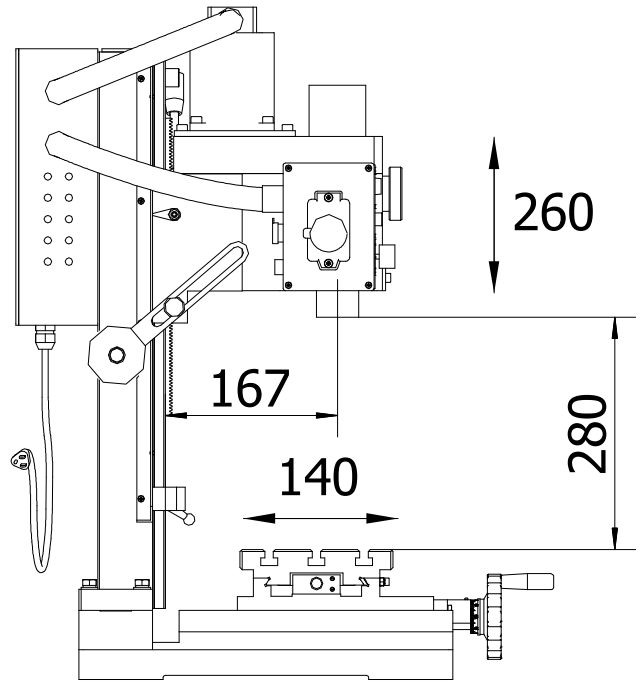
CHAPTER 1 SPECIFICATION

This is a mini vertical milling machine with multiple functions on either face mill or drill. It is easy to operation and can apply different function to insure you work more accurate and more efficient as long as you change the cutter upon your demand.

Face looking



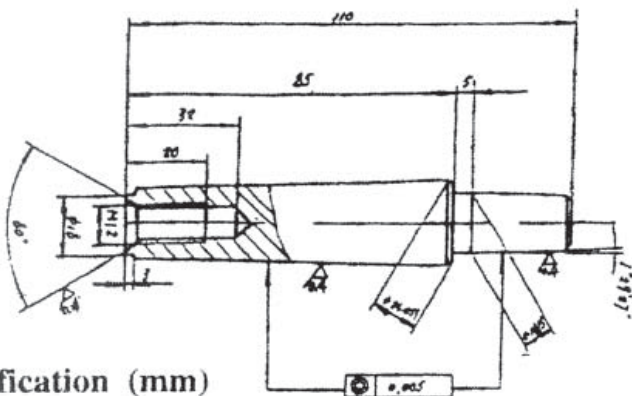
Side looking



1-1 Specification

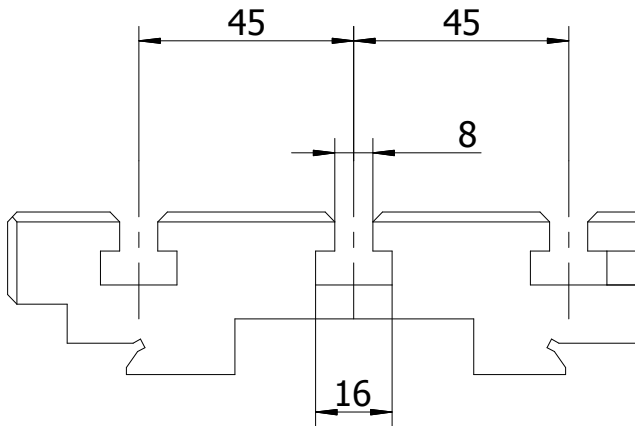
Longitudinal axis(X)	300mm
Cross axis(Y)	140mm
Headstock travel(Z)	260mm
Throat	167mm
Motor output power	500W
Spindle speed	0-2500 rpm
Spindle taper	MT3 or R8
Drilling capacity	13mm
End milling capacity	16mm
Face milling capacity	30mm
Weight(Net&Gross)	58/65KG
Overall dimension (L*W*H)	520mmx650mmx750mm
Packing size (L*W*H)	540mmx540mmx730mm

Specification-M1#3



MT3 Taper-shank specification:

figuration (mm)

T-slot size:**T-slot size**

Taper Number	MT3
Taper	0.05020
Taper hole (big head)	Ø23.825
Taper hole (big head)	Ø20.2
Length	85

T-nut**1-2 Packing list**

Number	Name	Specification	QTY
1	Socket head wrench	45-52	1
2	Drill chuck & taper shank	13mm	1
3	Oil can		1
4	Fixing Pin	X1025200	1
5	L Hex. Wrench	3、4、5、6	One each
6	Double end wrench	5.5×7、8×10、14×17	One each
7	Handle		2
8	T-Nut	C1200107	4
9	Fuse	220V-240V/5A	1

CHAPTER 2 MACHINE INSTALLATION**2-1 Fundamental Locating of The Machine**

The machine should be fixed on the working table with four Hexagon bolts.
Please install it to an appropriate location in order to demand the precision requirements of the machine.

The Selection of The Installing Location

- (1)The working table should have a flat surface.
- (2)Avoid the place with direct sunshine,heavy moisture and dust.

Method of Fundamental Locating:

(1)Please drill 4 locating holes on working table,the dimensions should as same as the holes on the machine base.(Attention:the machine,s position.You had better consider Y-axis hand wheel,because the exceeding of Y-axis hand wheel will benefit later on.)

(2) Please adjust the machine to horizon and fix the worktable with 4 M10 bolts and nuts.

2-2 Check the Follow Items Before Switching On the Machine:

1. Remove all of fixtures which used fixing the machine when you equipped the machine.
2. Check whether the power voltage is suited to the machine.(see label in front of the machine.)
3. Remove all obstacle which are around the machine.
4. Remove anti-rust protection which were used before you fixed the machine.
5. Check the angle of the pillar and adjust the bolts to see if they are tight enough.
6. Check the chuck, chuck holder and fixing pin on spindle to make sure they are unloaded.
7. Turn on the machine and check the direction of spindle rotating(clockwise).
8. Operate Longitudinal Axis(Working table), Cross Axis (Saddle seat), Vertical Axis (Fuselage) to ensure it,s in normal condition,
9. During the operation, watch out while you, re manipulating the machine. If there is any unusual situation, stop operating and repair immediately.

CHAPTER 3 PREVENTION AND MAINTENANCE

3-1 Prevention And Maintenance

3-1.1 Daily Maintenance

- (1) Inspect each operating part to ensure the condition of lubrication.
- (2) To examine each component if the part is fixed and no other abnormal situations.
- (3) Please clean and remove the obstacles around the machine in order to prevent machine damage and safety of the operator.
- (4) Please keep the machine clean after daily use and lubricate the movement parting to prevent rust.
- (5) Please watch out the operation while you, re manipulating the machine. In case that there is any unusual phenomena, please stop and repair immediately.

3-1.2 Seasonal Maintenance

- (1) Please use clean cotton or soft gauze to clean each part of the machine.
- (2) Please confirm whether the motion of machine, s head and fixture are smooth or loosen.
- (3) Check whether the spindle is over-swing.
- (4) Check whether each bolt and nut is loosen.
- (5) Examine the overall circuit(contact points conductor, plugs and switches...) to ensure its normal condition.

3-1.3 Seasonal Maintenance

- (1) Please perform the maintenance on each level and make record.
- (2) Please stop the machine before replacing the part or maintenance in order to avoid danger.
- (3) Maintenance and repair should be done regularly. If any abnormal situation occurs, stop the machine and repair immediately.
- (4) If the abnormal situation is beyond the regular maintenance. Please contact our service engineer nearest to you in order to avoid further damage and safety.

3-2 Maintenance of Accessories

3-2.1 Maintenance of Cutter

- (1) Use rag while install or unload the cutter to prevent the cutter falling and cause the split of blade as well as hurt the figures.
- (2) Keep the cutter in wooden or plastic box when you don,t need it. In order to maintain the sharp blade, the cutter should be kept respectively.
- (3) Pay extra attention on cutter rotating direction. Wrong rotating direction might cause sharpness and split blade and accelerate the cutter exhaustion. If it is hard to identify the blade direction in high speed revolving, please turn off the machine, during the process, in decelerating speed, easier to it will be identify the blade direction.
- (4) Put the cutter and working piece (or chuck piece) in right places before you turn on the machine. After turn on the machine, the cutter will get close to the working piece and mill it.
- (5) Sharpen the cutter as soon as it gets sharpness. Sharpness cutter is not only hard to do the milling work but also easy to cause damage on blade.

3-2.2 Maintenance of the shank

- (1) Please keep the taper shank clean.
- (2) Please keep the taper shank and cutter in order and keep the same cutter together. Next time when you use them, you will feel more convenient.
- (3) Draw bar and chuck have their own wrenches. For your convenience, please keep the wrenches near by the machine and never operate the machine with inappropriate tools.
- (4) Please use wrench to tight the nuts and never use other tools such as steel hammer to do so.

3-3 Mechanics Lubrication

In order to ensure the precision, keep lubrication on contact face.

In accessories, there is an oil-can, use it to lubricate. Please inject some lubricant to all of contact face before operating.

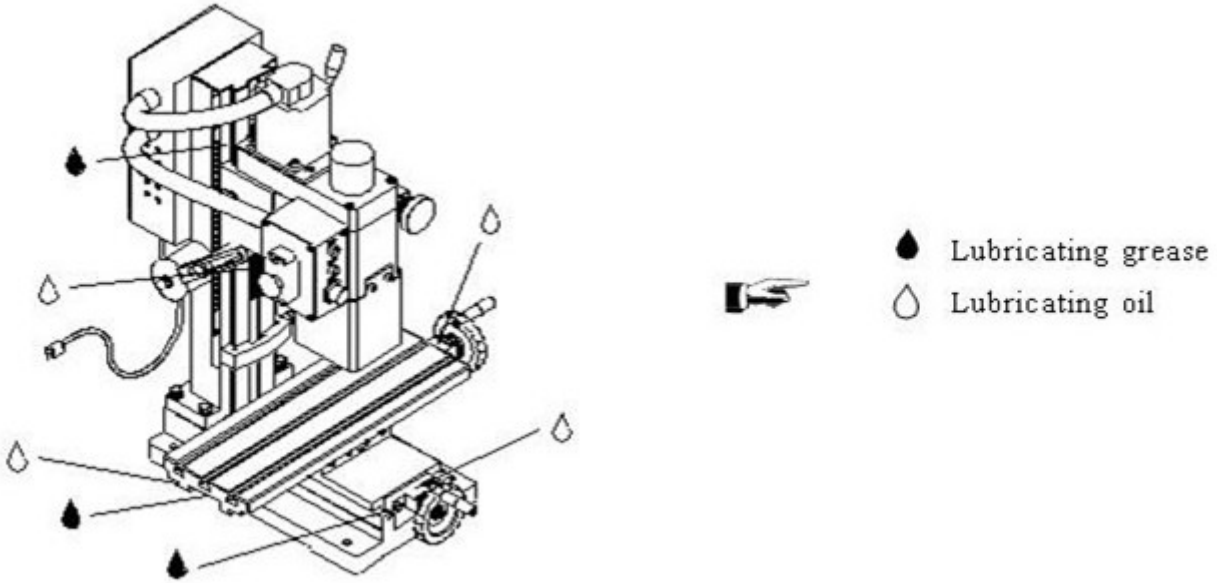
The following are the items that need to make lubrication on machine.

USE LUBRICATING OIL

- (1) Basament and saddle seat slide face.
- (2) Saddle seat and working atable slide face.
- (3) Fuselage sear and connecting strut
- (4) Fuselage and spindle box slide face.

USE LUBRICATING GREASE

- (1) X-Axis feeding screw(saddle seat)
- (2) Y-Axis feeding screw(working table).
- (3) Z-Axis feeding gear rack(fuselage). slide face.



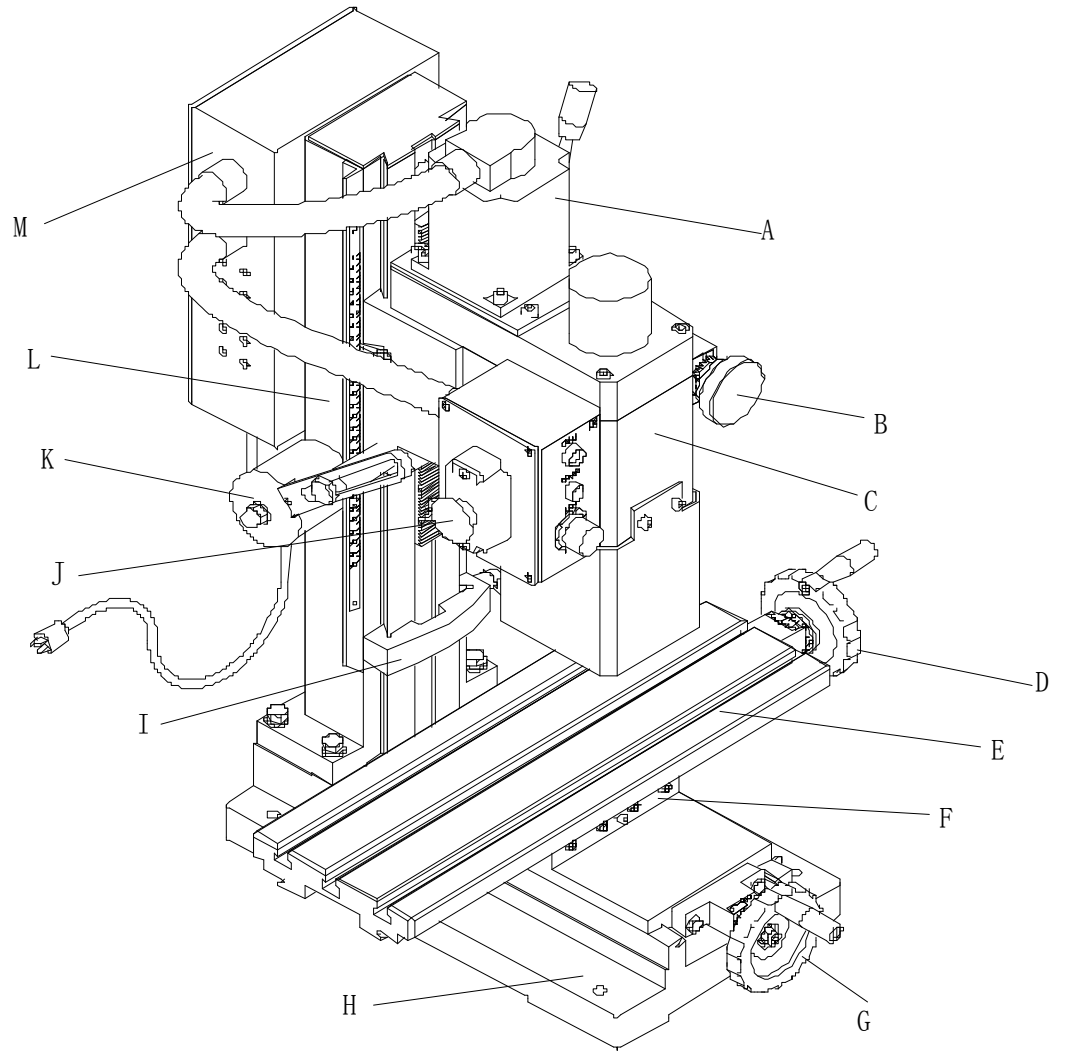
After working, clean the work table and lubricate with a little lubricant to protect the worktable.

CHAPTER 4 MACHINE STRUCTURE

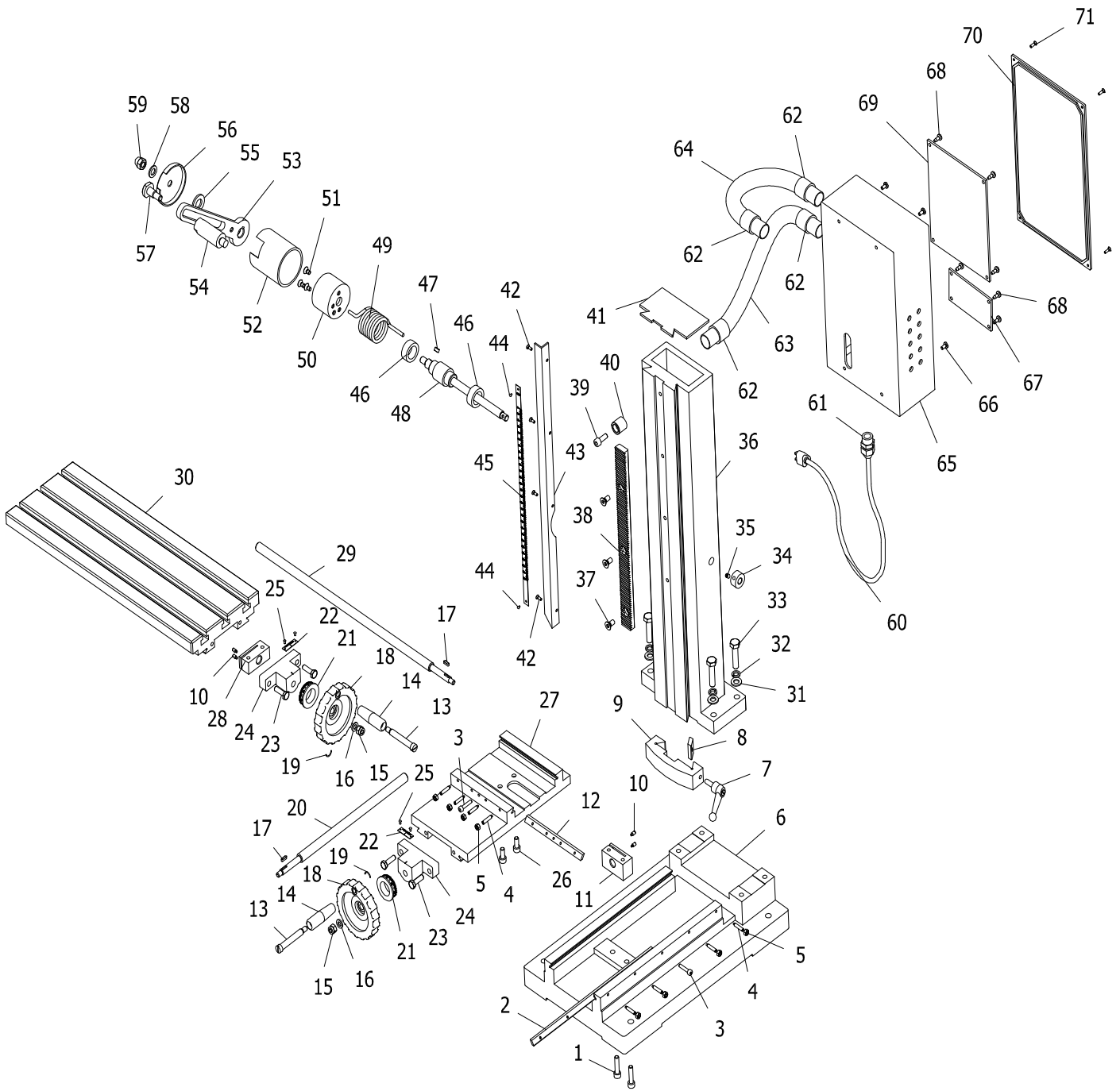
4-1 External Feature

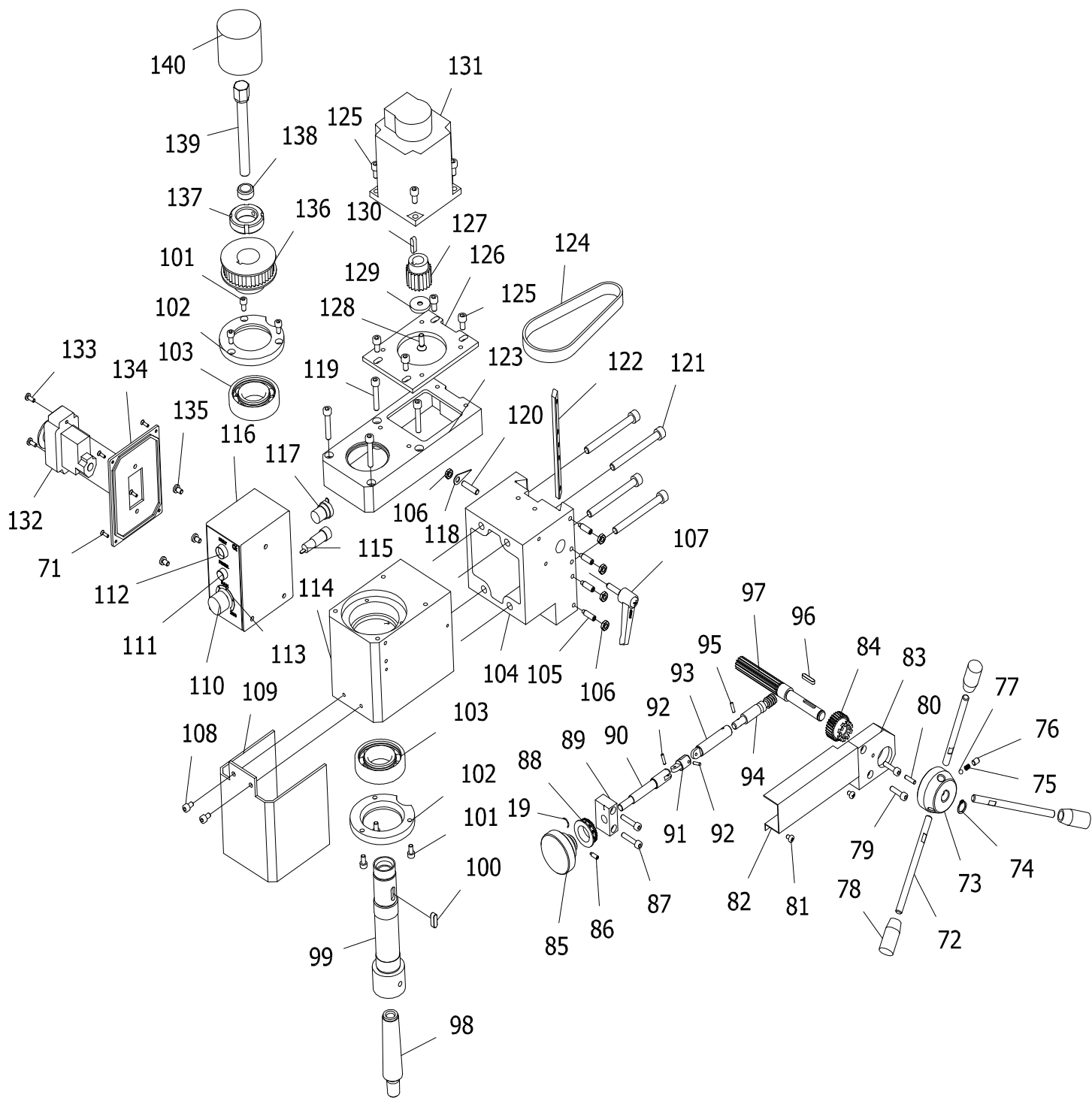
- A. Motor
- B. Fine feeding wheel
- C. Headstock & spindle
- D. Longitudinal feed hand wheel
- E. Working table
- F. Saddle
- G. Cross feed hand wheel

- H. Base
- I. Connecting strut
- J. Emergency stop
- K. Balance mechanism
- L. Colum
- M. Electrical box



Part list:





Item no.	Part number	Part name	QTY	Item no.	Part number	Part name	QTY
1	GB70-85 M6 x 25	Screw	2	51	GB819-85 M5x8	Screw	3
2	X11111	Cross wedge	1	52	X2A0906	Safety cover	1
3	GB70-85 M4 x 20	Screw	2	53	X2A0908	Support shaft	1
4	GB75-85 M4 x 20	Screw	8	54	X2A0912	Prop	1
5	GB41-86 M 4	Nut	8	55	GB97.1-85 12	Washer	1
6	X11101C	Base	1	56	X2A0909	End cover	1
7	X2021800	Handle set	1	57	X2A0911	Screw	1
8	X20908	Small wedge	1	58	GB95-85 8	Washer	1
9	X20907	Limit block	1	59	GB923-88 M8	Nut	1
10	GB75-85 M4 x 8	Screw	4	60		Power line	1
11	X11112	Y- axis lead screw nut	1	61		Connector 16	1
12	X11104	Y-axis wedge	1	62		Tube connector	4
13	C5C0608	Handle bolt	2	63		Tube	1
14	C5C0617	Handle sleeve	2	64		Tube	1
15	GB889-86 M6	Nut	2	65	SX21801	PC board box	1
16	GB97.1-85 6	Washer	2	66	GB818-85 M4 x 8	Screw	4
17	GB1096-79 3x10	Key	2	67		EMC	1
18	CT0903	Hand wheel	2	68	M4x10	Screw	8
19	X20221	Spring washer	3	69		Pc board	1
20	X11110	X- lead screw	1	70	SX21802	Cover of PC board	1
21	X11109	Dial	2	71	GB819-85 M3x10	Screw	8
22	X11108B	Label	2	72	X20219	Handle	3
23	M6 x 20	Blot	4	73	X20234	Handle seat	1
24	X11107	Lead screw seat	2	74	GB894.1 12	Spring washer	1
25	GB827-86 2x4	Label screw	4	75	C2A0408	Locking spring	1
26	M6 x 14	Screw	2	76	GB77-85 M6 x 8	screw	1
27	X11103A	Saddle	1	77	GB308-85 5	Ball bearing	1
28	X11106	Y-axis lead screw nut	1	78	GB4141.14-84	Handle sleeve M8 ×40	3
29	X11105B	Y-axis lead screw	1	79	GB70-85 M5 x 20	Screw	2
30	X11102A	Table	1	80	GB119-86 4 x 16	Pin	1
31	GB97.1-85 8	Washer	4	81	GB818-85 M4 x 6	Screw	2
32	GB93-87 M8	Spring washer	4	82	X20233	Switch cover	1
33	M8x35	Blot	4	83	X20230	Worm support	1
34	X2A0902	Lock washer	1	84	X20228	Spiral gear	1
35	M5 x 6	Screw	1	85	X20220	Handle wheel	1
36	SX2P0901	Column	1	86	GB79-85 M4 x 12	Screw	1
37	M6x12	Screw	3	87	GB70-85 M5 x 25	Screw	2
38	SX20903	Shaft	1	88	X20222	Dial	1
39	M6 x 16	Screw	1	89	X20223	Support	1
40	X20904A	Limit sleeve	1	90	X20224	Small shaft	1
41	X2A0913	Up cover	1	91	X20225	Connector	1
42	M3x8	Screw	4	92	GB119-86 3x12	Pin	2
43	SX2P0903	Ruler support	1	93	X20226	Sleeve	1
44	2x3	Label screw	2	94	X20227	Worm	1
45	SX2P0902	Ruler	1	95	GB117-86 3x12	Pin	1
46	X2A0907	Washer	2	96	GB1096-79 4x20	key	1
47	4x8	Key	1	97	X20229	Spindle gear	1
48	X2A0903	Rotate shaft	1	98	X20206	B16 taper-shank	1
49	X2A0905	Spring	1	99	SX20201	Spindle	1
50	X2A0904	Spring tube	1	100	6x18	Key	1

101	GB70-85 M5 x 10	Screw	6	121	GB70-85 M8 x 80	Screw	4
102	C2A0203	Oil cover	2	122	X20231	Wedge	1
103	GB278-89 80206	Bearing	2	123	SX20203	Cover	1
104	X20216	Spindle box seat	1	124	HTDM5-350 70T	Timing belt	1
105	GB79-85 M6 x 20	Screw	4	125	GB70-85 M6 x 12	Screw	8
106	GB6172-86 M6	Nut	5	126	SX20204	Motor connect plate	1
107	X20218B00	Small handle	1	127	XN10217	Motor pulley	1
108	GB70-85 M5 x 8	Screw	2	128	GB819-85 M6x18	Screw	1
109	X2A00A01	Dust protect cover	1	129	XN20204	Washer IV	1
110		X-1 switch board	1	130	GB1096-79 5x20	Key	1
111		Power lump	1	131	500W	Motor	1
112		M14lump base	1	132		Magnetic switch	1
113	SX22511	Switch label	1	133	GB818-85 M4 x 10	Screw	2
114	SX20202	Spindle box	1	134	SX21804	Cover	1
115	HJMF527	Fuse box	1	135	GB818-85 M5 x 8	Screw	3
116	SX21803	Switch box	1	136	SX20205	Spindle pully	1
117		Connector	1	137	X20209	Spindle nut	1
118	X20232	Pinion	1	138	X20210	Lead screw lock sleeve	1
119	GB70-85 M6 x 35	Screw	4	139	X20205	M12 lead screw	1
120	GB78-85 M6 x 25	Screw	1	140	X20211	Dust protective cover	1

CHAPTER 5 MECHANISM ADJUSTMENT

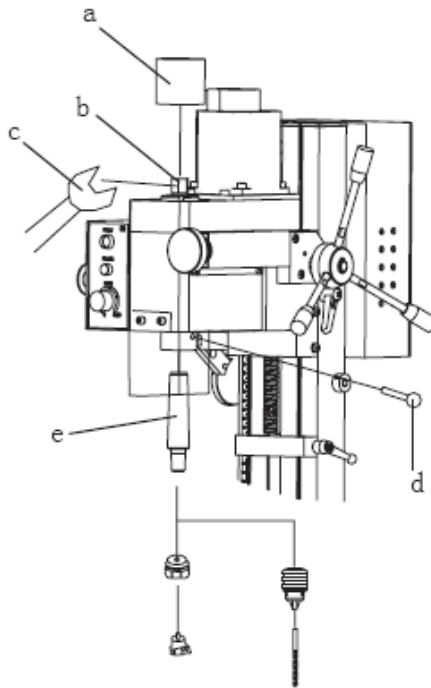
5-1 Installation and Removal of Taper shank

□Installation

- (1) Turn off the main power before you replace the cutter.
- (2) Pull out the protective cover(a).
- (3) Wipe the spindle sleeve and taper shank.
- (4) Put the taper shank(g) into spindle sleeve. Cutter should be matted with oil cloth to keep the safety of machine and fingers.
- (5) Insert fixing Pin(d) right on spindle sleeve.
- (6) Use #14 open end wrench(c) to tight(clockwise) spindle draw bar(b) for fixing taper shank.
- (7) Pull out the fixing pin!
- (8) Install the protective cover(a).

□Removal

- (1) Turn off the main power before you replace the cutter.
- (2) Pull out the protective cover(a).
- (3) Insert fixing pin(d) right on spindle sleeve.
- (4) Use #14 open end wrench(c) to loose (counter clockwise) the spindle draw bar(b).
- (5) Knock the taper shank(g) gently by plastic hammer to loose it in spindle sleeve. Then take off the taper shank(g).
- (6) Cutter should be matted with oil cloth to keep the safety of machine and fingers.
- (7) Install the protective cover(a).

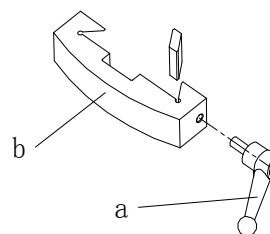


※For your safety, any adjustment on machine should be operated under no electricity.※

5-2 Travel Adjustment

Using the limit block can control the traveling of spindle box.

- (1) Loosen the handle(a) beside of the limit block(b).
- (2) Adjust the limit block(b) in position.
- (3) Tighten the handle.
- (4) Travel position can refer to the ruler on the fuselage rotary.



5-3 Wedge Adjustment

After a long -term contact motion to the machine function error occurs due to relative surface motion. wedge act as an interface on each slide face. In order to eliminate this error this machine make use of adjusting screw making pressure between two machine parts (ex. Spindle Box and Fuselage) Adjust and keep up the contact pressure for maintain its mechanical precision.

In order to ensure the precision, the pressure between the two elements needs to be adjusted appropriately because of abrasion which the machine produced from the contact motion for same time(about one year).

The following items need to make Miter Wedge pressure adjustment

1. Basement and saddle seat slide face.
2. Saddle seat and working table slide face.
3. Fuselage seat and connecting strut slide face.
4. Fuselage and spindle box slide face.

The way to adjust:

- (1)Loosen the locked nuts.
- (2)Adjust the foremost pressure of the miter wedge by locked nut.If necessary,please all adjusting screw has to the same.
- (3)Tighten and loosen the adjusting screws and keep in mind that the pressure of each adjusting screw has to be the same.
- (4)Tighten the locked nut uniformly.
- (5)When lock the locked nut,please use the #3 interior hexagonal wrench to fix the adjusting screw from rotating to cause the unbalance pressure.
- (6)Please adjust the middle portion first and then go to toward the interior from two sides uniformly while you are adjusting the screw in order to ensure an uniform pressure.



CHAPTER 6 OPERATION AND NOTICE FOR USE

6-1 Method of Operation

□ Drilling or Deep Milling

1. According to Chp5, replacement of chuck and tool. Install appropriate adjustment and tighten it certainly.
2. Select appropriate speed level. [ATTENTION: When spindle is running, don't change the HIGH/LOW speed !
3. Use press cake or fixture set the workpiece on the working table.
4. Adjust working table(Longitudinal Axis(Y))and Saddle seat(Cross Axis(X)).
5. Loosen the limit block handle, adjust the blocks in position. Note do not let tool meet the workpiece.
6. Put Adjusting tools in order and remove all obstacles which are around the machine.
7. Turn on the main power. Adjust appropriate spindle speed and drilling or deep milling.
8. Refer the ruler on fuselage can know drilling or milling depth.
9. Finish working, turn off power and take the spindle to upper position.
10. Clean the machine.

□Face Milling

1. According to Chp5, replacement of chuck and tool. Install appropriate adjustment and tighten it certainly.
2. Select appropriate speed level. [ATTENTION: When spindle is running, don't change the HIGH/LOW speed!]
3. Use press cake or fixture set the workpiece on the working table.
4. Adjust working table(Longitudinal Axis(Y)) and Saddle seat(Cross Axis(X)) in position.
5. Release limit block on fuselage, adjust the depth of cut, then fixed.
6. Arrange all tools in proper place.
7. Turn hand wheel of working table(Y-axis) and saddle seat(X-axis) to do face milling.
8. Finishing all steps, turn off power and make spindle return to upper position, release workpiece.
9. Clean the machine.

□Drilling or Milling Speed

Before any operation, set the spindle to a correct speed of running.

The operating speed range for working is 0 to 2500 rpm, For most part, the correct speed may consider the size of working face and the material. Generally, you can use higher speed for softer material or small holes. Use lower speed for harder material or bigger holes.

A good rule of thumb is : Smaller hole and the softer material, use higher speed. But drill too fast (above 300 rpm) if your workpiece is wood, you may burn.

6-2 Attend for Operation

Please attend the following items as you operate in order to ensure the operation safety and maintain the capacity of machine.

□ Inspection before turn on

1. Before turn on power, you must check the tool chuck and cutter tighten it certainly.
2. Inspect whether each machine part has loosen.
3. Check the rod of speed adjustment at correct position certainly.
4. Workpiece is fixed with press cake or fixture certainly.
5. Clean and remove the obstacles around the machine.

□During Operation

1. Drinking alcohol or being worse spirited is absolutely forbidden to operate the machine.
2. Wearing gloves or necktie is absolutely forbidden to operate the machine.
3. Select and install appropriate cutter, no loosen.
4. The machine will shaking as follows condition:
 - a. The depth of cut is too deep.
 - b. The feeding speed is too fast.
 - c. The rotation speed is too fast.
 - d. The machine and stock plane is not fixed firmly.
 - e. The vice and workpiece is not fixed firmly.

□Protection and Maintenance

1. Please perform the maintenance on each level and make a record.
2. Please turn off the power perform maintenance or projection.
3. Please inform our dealer to assign professional person to deal with the action beyond extent of individual maintenance and protection.

CHAPTER 7 GENERAL SAFETY INSTRUCTION

Warning! When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following. Read all these instructions before operating this product and save these instructions.

1. Keep work area clean.

-Cluttered areas and benches invite injuries.

2. Consider work area environment.

-Do not expose power to rain. Do not use power tools in damp or wet locations.

Keep work area well lit. Do not use power tools where there is risk to cause fire or explosion.

3. Guard against electric shock.

-Avoid body contact with earthed or grounded surfaces (e.g. pipes, radiators, ranges, refrigerators.)

4. Keep children away.

-Do not let visitors touch the tool or extension cord. All visitors should be kept away from work area.

5. Store idle tools.

-When not in use, tools should be stored in a dry, high or locked up place, out of reach of children.

6. Do not force the tools.

-It will do the job better and safer at the rate for which it was intended.

7. Use the right tools.

-Do not force small tools or attachments to do the job of a heavy duty tool. Do not use tools for purposes not intended; for example, do not use circular saws to cut three limbs or logs.

8. Dress properly.

-Do not wear loose clothing or jewelry, they can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protecting hair covering to contain long hair.

9. Use safety glasses.

-Also use face or dust mask if the cutting operation is dusty.

10. Connect dust extraction equipment.

-If devices are provided for the connection of extraction and collection facilities, ensure these are connected and properly used.

11. Do not abuse the cord.

-Never carry the tool by cord or make it to disconnect it from the socket, keep the cord away from heat, oil and sharp edges.

12. Secure work

-Use clamp or a vice to hold the work. It is safer than using your hand and it frees both hands to operate the tool.

13. Do not overreach.

-Keep proper footing and balance at all times.

14. Maintain tools with care.

-Keep cutting tool sharp and clean for better and safer performance. Follow instructions for lubrication and changing accessories. Inspect tool cord periodically and if damaged have it repaired by an authorized service facility. Inspect extension cords periodically and replace, if damaged. Keep handle dry, clean and free from oil and grease.

15. Disconnect tools.

-When not in use, before servicing and when changing accessories such as blade, bits and cutters.

16. Remove adjusting keys and wrenches.

-Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.

17. Avoid unintentional starting.

-Do not carry a plugged-in tool with a finger on the switch. Ensure switch is off when plugging in.

18. Use outdoor extension leads.

-When tool is used outdoors, use only extension cords intended for outdoor use.

19. Stay alert.

-Watch what you are doing. Use common sense. Do not operate tool when you are tired.

20. Check damaged parts.

-Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, free running of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated in this instruction manual. Have defective switches replaced by an authorized service facility. Do not use the tool if the switch does not turn it on and off.

21. Warning.

-The use of any accessory or attachment, other than those recommended in this instruction manual, may present a risk of personal injury.

22. Have your tool repaired by a qualified person.

-This electric tool is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.

CHAPTER 8 POWER CONNECTION & ELECTRICITY

8-1 Power Connection/disconnection & Operation

1. The connection, disconnection, and grounding is carried out through the plug, equipped on the machine. For the safety reason, Do not change this plug into any the other type in any situation.
2. For the protection of control device, we recommend the operator to supply a fuse with current rating and the total length between fuse and connection terminal shall be according to EXTENSION LEAD CHART.

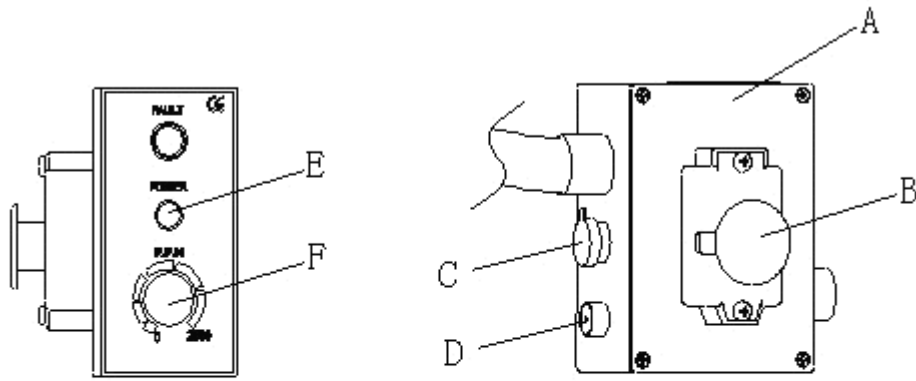
EXTENSION LEAD CHART

Ampere rating	3A	6A	10A	13A
Extension Cable Length	Wire Size mm ²			
7.5 M	0.75	0.75	1.0	1.25
15 M	0.75	0.75	1.0	1.5
22.5 M	0.75	0.75	1.0	1.5
30 M	0.75	0.75	1.25	1.5
45.5 M	0.75	1.25	1.5	1.5

3. The exact power source is 110V or 230V, single phase, 50/60Hz. (see label in front of the machine)
4. Disconnect tools from power source with plug before servicing and when changing accessories such as guard.
5. Running
 - 1) Open the machine, rotate the power switch to "1", and then adjust the speed.
 - 2) Stop the machine, you can rotate the power switch to "0".

8-2 Electricity operation and attention

1. Open the cover of the emergency stop (A), press the green button, the green light (C) on the electric box (B) is lighted.
2. Rotate the speed switch (D) to "1", the motor will be on and then the spindle will be rotate, and you can adjust the speed switch between 0~2500 rpm.
3. If you want to stop the spindle, you can rotate the speed switch to "0" or press the emergency switch.
4. If you need to emergency stop, please press the button (A) to cut off the power. Switch on again, and then you can follow the above step to use the machine.
5. There are 10A or 5A fuse in the fuse box to protect the machine. (110-115V/5A or 220-240V/3A).
6. The power supply system of this machine has an auto over-load protective function. If the feeding is too fast or drilling is too deep, the spindle will stop working, a yellow lamp lights. Just turn off the Variable Speed control knob to zero. And then the machine will work again and the yellow lamp will off automatically.



A. Emergency stop switch
 C. Green lamp
 E. Fuse box

B. Electric control box
 D. Variable speed control knob
 F. photoelectricity connector

8-2 Wiring diagram

